EXHIBIT A

NCBI PubMed www.pubmed.gov
A service of the National Library of Medicine and the National Institutes of Health
My NCBI [Sign In] [Register]
All Databases PubMed Nucleotide Protein Genome Structure OMIM PMC Journals Books
Search PubMed for Go Clear
Limits Preview/Index History Clipboard Details
Display Abstract Show 20 Sort by Send to
All: 1 Review: 0

About Entrez
Text Version
Entrez PubMed
Overview
Help | FAQ
Tutorial
New/Noteworthy
E-Utilities
PubMed Services
Journals Database
MeSH Database
Single Citation Matcher
Batch Citation Matcher
Clinical Queries
Special Queries
LinkOut
My NCBI
Related Resources
Order Documents
NLM Mobile
NLM Catalog
NLM Gateway
TOXNET
Consumer Health
Clinical Alerts
ClinicalTrials.gov
PubMed Central

1: Yao Xue Xue Bao. 2001 Aug;36(8):616-20. Related Articles, Links

[Studies on the pharmacokinetics and relative bioavailability of salbutamol aerosol in healthy volunteers]

[Article in Chinese]

Du XL, Zhu Z, Fu Q, Li DK, Xu WB.

Department of Pharmacy, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing 100730, China. xiaoli22@hotmail.com

AIM: To study the pharmacokinetics and relative bioavailability of salbutamol aerosol in healthy volunteers. METHODS: An HPLC method for the determination of salbutamol in human plasma was improved. Ten healthy male subjects were enrolled. A randomized, two-way crossover, open design was adopted. After the subjects inhaled or orally administered salbutamol, fourteen blood samples were taken at predetermined time. The concentrations of salbutamol in plasma were determined by HPLC, and then assessed with PCNONLIN software to obtain the pharmacokinetic parameters and relative bioavailability of aerosol versus water solution. RESULTS: The standard curve was linear over the range 0.2-20 ng.mL-1. The intra- and interassay RSDs were 7.01% and 2.10% at 0.4 ng.mL-1, 2.18% and 5.25% at 4.0 ng.mL-1 and 4.61% and 4.85% at 15.0 ng.mL-1. The recoveries were between 90% and 110%. The pharmacokinetics of salbutamol aersol was described well with a two-compartment model, and the parameters for salbutamol inhaled and orally administered were assessed as follows: Tmax were (0.22 +/- 0.07) h and (1.8 +/- 0.6) h, Cmax were (3.4 +/- 1.1) ng.mL-1 and (3.9 +/- 1.4) ng.mL-1, T1/2 beta were (4.5 +/- 1.5) h and (4.6 +/- 1.1) h, respectively. The AUC0-20 min (inhal) was 7.94 times as high as the AUC0-20 min (p.o.). There were significant differences between Tmax, AUC, K12, K21, alpha and T1/2 alpha ($P < 0.05$). The relative bioavailability of salbutamol aerosol was 57.23% compared with its oral solution. CONCLUSION: The assay was sensitive, specific, accurate and precise. The absorption process of salbutamol aerosol in human was significantly different from that of the oral solution. It was demonstrated that AUC0-20 min reflected the lung availability of salbutamol inhaler.

Publication Types:
- Clinical Trial
- Randomized Controlled Trial